interval, until resolution of 95% of incidents). With some clarification, SWBT agrees to provide this interval information in the format requested. Although the 1 hour interval requirement does not pertain, this category clearly fits under the requirements of Section 251. (In their comments, SWBT argues against providing measurements related to New Circuit Failure Frequency and Trouble Report Rate. These measures, are important in assessing parity under the requirements of Section 251. However, SWBT has committed to both these measures in their Oklahoma interconnection agreement with Sprint.)

* Time to restore PIC after trouble incident (measured by percentage restored with each successive 1 hour interval, until resolution of 95% restored). This measure does not pertain to requirements under Section 251.

* Mean time to clear network / average duration of trouble (measured in hours). SWBT agrees to report interval information in this format, although they argue that this category duplicates the Time to Restore requirement. This category is critical to determining parity under the requirements of Section 251.

58. SWBT proposes to update results for these seven performance measures on a monthly basis and would provide SWBT information on a corporate-wide basis. Key to determining market parity would be SWBT willingness to provide these measures more frequently on a geographic and class of service basis.

D. PERFORMANCE MEASURES NOT INCLUDED IN SWBT'S APPLICATION

59. SWBT's assertion that they will perform wholesale functions for CLECs at least equal in quality to those performed for itself or its subsidiaries is a sound basis for meeting the

TAB M2-25

requirements of the Act. However, the ability to test whether parity exists or whether discrimination is taking place is dependent on the existence of explicit and specific performance measures and the reporting of results therein for SWBT and new entrants.

60. This affidavit is not an attempt to prescribe a model set of performance measures. Nor does it attempt to lay out a minimum set of performance measures that would meet the requirements of the Act. However, it is a discussion of typical performance measures for each of the wholesale functions BOCs will perform under the 1996 Act, required to provide resale services, unbundled network elements, and facilities-based interconnection. It also discusses examples of market and product parity measurements as well as administrative reporting mechanisms. The performance measure examples discussed below are not new. Most have been tracked and reported by BOCs internally, are reported to state or federal regulatory bodies, or have been proposed as parity measures by at least one BOC.

61. Pre-ordering: Pre-ordering performance measures revolve around the ability of a CLEC service representative to complete an order with an end user on line with at least the speed and accuracy of a BOC service representative taking a similar order from a retail end user. Since CLEC service representatives will likely interface with BOC OSSs and with BOC service representatives, performance measures are needed to measure the cycle time and reliability of both interactions. These measurements will ensure that BOC service representatives do not have an unfair advantage in creating a superior end user perception of speed and efficiency. Typical pre-order performance measures not specifically proposed by SWBT in their Section 271 application.

* Pre-order OSS Availability--Measures the percentage "up-time" of BOC interconnect

TAB M2-26

systems. SWBT agrees to provide availability of systems in its Oklahoma interconnection agreement with Sprint.

* Pre-order BOC Service Center Availability--Measures the hours the BOC service center is open to CLEC queries. SWBT agrees to equal availability in its Oklahoma interconnection agreement with Sprint.

* Pre-order BOC Service Center Response Time--Measures how quickly BOC service representatives respond to CLEC queries. Agreed to in SWBT's Sprint Oklahoma interconnection agreement. Also proposed by Ameritech in their Michigan SGAT.

* BOC OSS Response Time--Measure, in seconds, the speed with which CLEC service representatives receive the following information:

    * Address Verification
    * Request for Telephone Number
    * Request for Customer Service Record (CSR)
    * Service Availability
    * Service Appointment Scheduling

Several such measures are proposed by Ameritech.

These are important in creating a customer perception of equal calling time when placing an order with a CLEC.

62. Ordering: Ordering performance measures revolve around measuring the CLEC's ability to process end user service orders into the BOC and through the BOC OSSs with speed and accuracy at least equal to the BOC itself. Ordering cycle time is primarily measured by the promptness of communications between the BOC and the CLEC and by the success of order

TAB M2-27

"flow-thru." Ordering reliability is measured by the accuracy of the service order. Typical ordering performance measures not specifically proposed by SWBT in its Section 271 application include:

* Firm Order Response Time provided by product, e.g., Resale POTS, UNE Loop, Trunk Order- An important adequacy performance measure because it measures whether CLEC service orders are processed in a manner that allows overall provisioning intervals to be at parity. If the service order does not flow speedily into the BOC OSSs, a lengthy provisioning interval and a due date miss is likely.
    * Firm Order Commitment- SWBT agrees to this measure in its Oklahoma interconnection agreement with Sprint. Proposed by Ameritech in their Michigan SGAT. This notifies a CLEC that its service order has been accepted.
    * Order Jeopardy- This notifies a CLEC that a due date must be changed.
    * Order Reject- This notifies a CLEC that a service order contains errors.
    * Order Completion- This notifies a CLEC that a service order has been completed.

    As noted above, SWBT has agreed with this measure under the requirements of Section 272, calling for a renewed measure each time an order is subsequently submitted. I don't disagree with this requirement, however an overall measure per service order would be worthwhile in meeting the spirit of the Section 251 requirements.
* Flow-Through- Measures the percentage of service orders that flow to and through BOC OSSs without human intervention. This is an important measure in determining not only parity related to the service order processing cycle time, but also in the cost of the process to both the BOC and the CLEC.

TAB M2-28

* Service Order Accuracy--Measures the percentage of service orders prepared by the BOC exactly as ordered by a CLEC.

63. Provisioning: Provisioning Performance Measures measure how quickly and how accurately end user service orders are completed. Parity in performing provisioning functions results in CLEC customers receiving service with speed and quality at least equal to that received by BOC retail or subsidiary customers. Provisioning measures have a long and detailed history within the BOCs. They are used to review and compare manager performance, as well as required by state and federal regulatory bodies. Provisioning is a process highly visible to end users and, therefore, is a key determinant to CLEC success in the marketplace. Typical provisioning performance measures not provided by SWBT in its Section 271 Application or any existing interconnection agreements, include:

* Installation Interval- Measured as a percentage of service orders completed in more than X days. Should be reported on a disaggregated product and market basis. Mentioned by SWBT in their application as a part of submitted FCC ARMIS data, but not defined as a performance measure. Proposed by Ameritech as a performance measure in their Michigan SGAT.

* Mean Installation Interval- Measured in days from end user request to order completion when the appointment is specified by the BOC. End user requested or desired due dates should not be included. Should be reported on a disaggregated product and market basis. This "raw" interval is as important, and perhaps more important, than the percentage of completions beyond a set objective. For example, if SWBT completes 95% of its own retail service orders within 5 days and 95% of CLEC resale orders within 5 days, it is still

TAB M2-29

possible that the mean interval for SWBT retail orders could be significantly different (higher or lower) than the CLEC orders. Proposed by Ameritech as an audit process.

* Held Orders- Measures non-completed service orders held more than X days, usually held for lack of network facilities. This is an important measure in determining whether SWBT prioritizes new facility work in a nondiscriminatory manner.

* Completed Order Accuracy--Measures whether the end user received what the CLEC ordered.

* 911 Database Update Speed and Accuracy- Measures the percentage of missed due dates updating 911 database and the percentage accurate updates. Proposed by Ameritech in their Michigan SGAT.

64. Maintenance: Maintenance performance measures depict two subprocesses: (1) Trouble reporting and clearance, and (2) Network quality. Trouble reporting performance measures describe how quickly and how well end user trouble is cared for. Performance parity exists if a CLEC customer trouble is cleared with at least the same speed and quality as the BOC retail or subsidiary customer. This is a highly visible process to the end user and has significant impact on the end user's perception of the service provider. Typical maintenance performance measures not provided by SWBT in its Section 271 Application or any existing interconnection agreements, include:

* Trouble Report Rate- Measured as the number of trouble reports per customer or access line. Data is gathered by product and market categories and can be analyzed by cause and other factors. This is the key measure of service reliability and, as a historical matter, positively correlates with an end user's perception of their provider. SWBT agrees to

TAB M2 - 30

provide report rate results in its Oklahoma interconnection agreement with Sprint. Also proposed by Ameritech in their Michigan SGAT and by PacTel.

* Repeat Reports- Measured as the percentage of end user troubles on the same access line within an agreed number of days of the original trouble. Repeat reports are a key indicator of maintenance process reliability and, historically, have a positive correlation with an end user's perception of provider quality. SWBT agrees to provide repeat report results in its Oklahoma interconnection agreement with Sprint. Proposed by Ameritech as part of their Michigan SGAT and by PacTel.

* Mean Time to Repair- Measured as the average interval from trouble report to clearance. This is the key measure of trouble report cycle time. Should be gathered and reported on a product and market basis. SWBT specifies UNE Mean Time to Repair in many of their interconnection agreements and promises equal repair treatment in their interconnection agreement with AT&T in Texas, but does not propose specific Mean Time to Repair measures for all products and markets. SWBT has agreed to this measure under Section 272 requirements and in its Oklahoma interconnection agreement with Sprint. Ameritech includes this measure in their Michigan SGAT and PacTel has proposed it as well.

* Out of Service Over 24 Hours- Measured as a percentage of out-of-service troubles cleared within 24 hours. This measure relates to Mean Time to Restore, but specifically measures parity in out-of-service restoral. Required by many state regulatory bodies. Agree to by SWBT in its Oklahoma interconnection agreement with Sprint. Proposed by Ameritech in their Michigan SGAT.

* BOC Service Center Speed of Answer- Measures how quickly BOC repair service

TAB M2-31

representatives respond to CLEC queries. This is an important measure of performance adequacy, relating to an activity not required by the BOC. Proposed by SWBT in their interconnection agreement with Sprint, but not specified as a performance measure. Also proposed by Ameritech in their Michigan SGAT.

65. Network Quality performance measures measure how well SWBT's network is maintained and whether SWBT's network performance discriminates against new entrants. Comparisons are between the performance distribution for SWBT retail or subsidiary customers and the performance distribution for CLEC customers. While it's not clear that this type of discrimination would be likely, network performance measures are critical to customer service and are also historically readily available. Typical network quality performance measures not provided by SWBT in its Section 271 Application or any existing interconnection agreements, include:

* Number of Major Network Events--Measures whether CLEC customers are disproportionately affected by significant switch or transmission down time. Because of their significance, Major Events are reported by all BOCs to the FCC as a part of Network Reliability Council requirements.
* System Signaling 7 (SS7) Link and Database Failures--Link Failure measurements proposed by Ameritech in their Michigan SGAT.
* Post Dial Tone Delay--Measured in seconds on various call combinations made by CLEC customers through BOC network to CLEC platform.
* Blocked Call Attempts--Measures blocked call attempts by CLEC customers through BOC network to CLEC platform.
* Various transmission measures, including loop transmission loss, signal-to-noise ratio,

TAB M-32

balance, and idle circuit noise.

66. Billing: Billing performance measures measure the timeliness, accuracy, and completeness of end user billing records and wholesale bills. These are measures of performance adequacy, and are important because, once provisioned, billing is the most frequent and visible contact an end user has with the provider. Typical billing performance measures not provided by SWBT in its Section 271 Application or any existing interconnection agreements, include:

* Bill Timeliness--Measures the percentage of end user and wholesale billing records delivered on time.

* Bill Accuracy--Measures the percentage of accurate end user and wholesale billing records.

* Bill Completeness--Measures the percentage of complete end user and wholesale billing records.

67. Toll and Directory Assistance: Toll and Directory Assistance performance measures measure the speed of response to CLEC customer by BOC operators. They are measures of performance parity. Typical Toll and Directory Assistance performance measures not provided by SWBT in its Section 271 Application or any existing interconnection agreements, include:

* Average Speed of Answer-Toll--Measures raw interval in seconds or as a percentage under a set objective. Proposed by Ameritech in their Michigan SGAT.

* Average Speed of Answer-Directory Assistance--Measures raw interval in seconds or as a percentage under a set objective. Proposed by Ameritech in their Michigan SGAT.

68. Market Parity: Market parity ensures that agreed to performance measures present appropriate customer group comparisons between SWBT and CLEC's. Customer groups

TAB MQ-33

generally fall into two categories: Geographic and Class of Service. For example, if a CLEC offers service in only one city, appropriate performance measures would provide comparable SWBT retail results for that city only. Similarly if a CLEC targets only small business customers, appropriate performance measures would provide comparative SWBT results for its small business customers only. SWBT does not explicitly discuss geographic or class of service market parity in its application.

69. Product Parity: SWBT, in its Application and negotiated interconnection agreements, does include both Resale and UNE performance measures, but has not formally agreed to this breakout. Ameritech has proposed performance measures for both Resale and UNE in its Michigan SGAT. Product parity also requires that performance measures be identified, measured, and reported for product or product families a CLEC offers to end users. Examples include POTS, Subrate data, HICAP data, Centrex, and ISDN. If a CLEC offers DS1 service to its end users as part of a UNE loop resale arrangement, SWBT would need to provide results for service provided to those customers and for its own DS1 customers. Ameritech has proposed product-based performance measures in its Michigan SGAT.

70. Reporting Requirements: SWBT makes no mention of performance measure data availability. This would allow CLEC access to SWBT partitioned results databases, in turn allowing a CLEC to pull reports themselves. Further, SWBT does not explicitly specify entities to be measured. Examples include results for a particular CLEC, all CLECs, SWBT retail, and any appropriate SWBT affiliates. In its comments on service requirements under Section 272, SWBT argues against providing results for individual affiliates. Ameritech has proposed to provide results for each CLEC, all CLECs, and their own retail end users in its Michigan SGAT.

TAB M2-34

but not for its own affiliates. SWBT has not specified or provided examples related to performance report frequency, accuracy, or format.

V. CONCLUSIONS

71. SWBT's Section 271 application to provide in-region interLATA service in the state of Oklahoma includes a commitment to provide wholesale functions to new entrants at least equal in quality to that provided to its own retail end users. Further, the application proposes several specific performance measures that would allow, if properly disaggregated, a test of that commitment to parity. These proposed measures are nominally those reported to the FCC as part of ARMIS reporting requirements.

72. The application also refers to negotiated interconnection agreements as including other specific performance measures SWBT would be committed to for particular CLECs in particular markets. In Oklahoma, specified measures are UNE loop provisioning and maintenance cycle time and Interim Number Portability provisioning cycle time. Its agreement with Sprint is particularly robust with respect to performance measures. Finally in its agreement with AT&T in Texas, several Resale performance measures are also specified.

73. SWBT also agrees with a number of performance measures proposed by the Commission under Section 272 of the Act. Five out of the seven proposed measures also pertain to requirements under Section 251, implying SWBT's support for these measures.

While few performance measures are explicitly proposed in SWBT's Section 271 Application, many are implicitly discussed and others are identified or discussed in interconnection

TAB M2-25

agreements or regulatory proceedings. It follows that SWBT could make these additional performance measures an explicit part of their 271 application. However, some performance measures needed to determine parity in SWBT's provision of wholesale products are not identified in any document or proceeding. Examples include:

* BOC OSS response time for preorder functions
* Order jeopardy, reject, and completion notice cycle time
* Service order accuracy
* Service order flow through
* Installation interval measured as a percent of agreed to intervals
* Mean installation interval
* Held orders
* 911 database update speed and accuracy
* Major network events
* SS7 link failures
* Blocked call attempts
* Various transmission measures
* Bill timeliness
* Bill accuracy
* Bill completeness
* DA and toll speed of answer

Additionally, SWBT has not discussed providing appropriate market parity reports. They have discussed performance measure report frequency and comparison entities in their Oklahoma

TAB M2-36

interconnection agreement with Sprint, but have not provided explicit examples. Product parity is implied by SWBT's separate treatment of resale and unbundled network elements, but no commitment is made to a broader recognition of different CLEC offerings.

74. Although SWBT has clearly committed to adequate and parity performance, their application should include more explicit identification of performance measures, including sample reports, that would allow competitors and regulators to judge whether adequacy and parity have been achieved for all wholesale functions. As at least a rough guide to providing such explicit identification, SWBT's Oklahoma interconnection agreement with Sprint and Ameritech's Michigan SGAT and subsequent performance measure proposals, attached, represent a good beginning.

TAB M2-37

The information contained in this affidavit is true and correct to the best of my knowledge and belief.

Michael J. Friduss

Subcribed and sworn to before me this 16th day of May, 1997.

Vivian R. Lewis
NOTARY PUBLIC

My commission expires: March 31, 2001

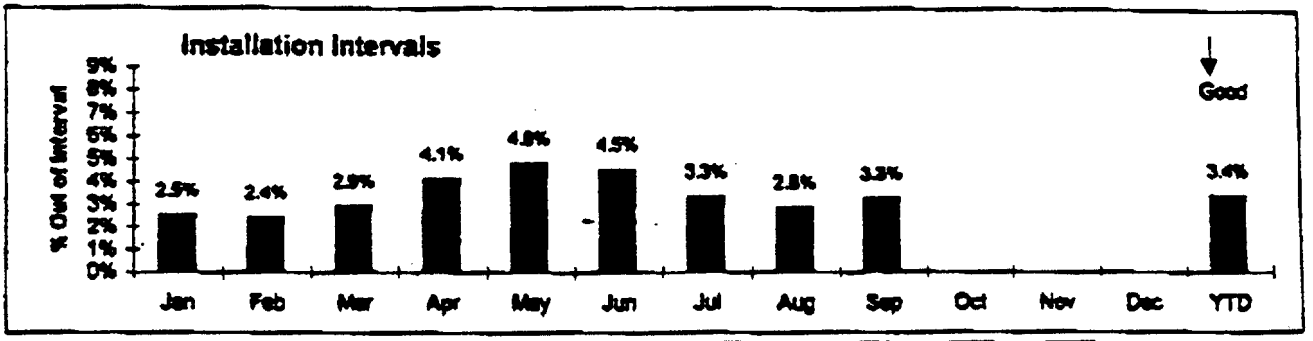
TAB M2-38

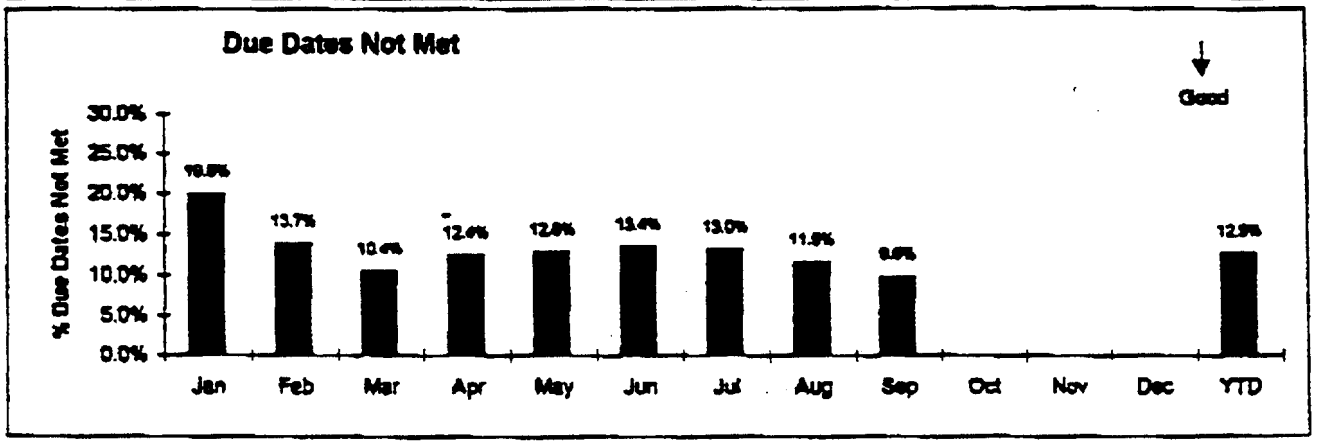
SAMPLE OF AMERITECH PERFORMANCE MEASURES SUBMITTED IN ILLINOIS DOCKET NO. 96-0404

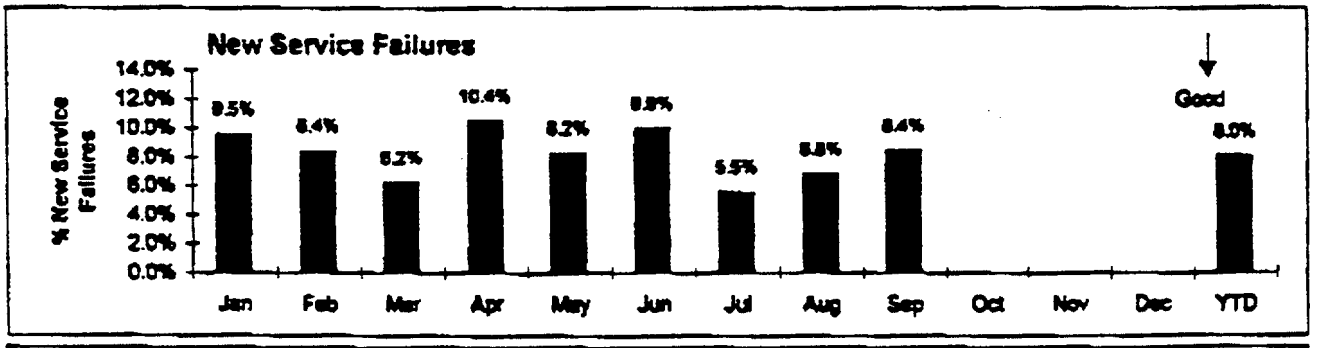
TAB M2-39

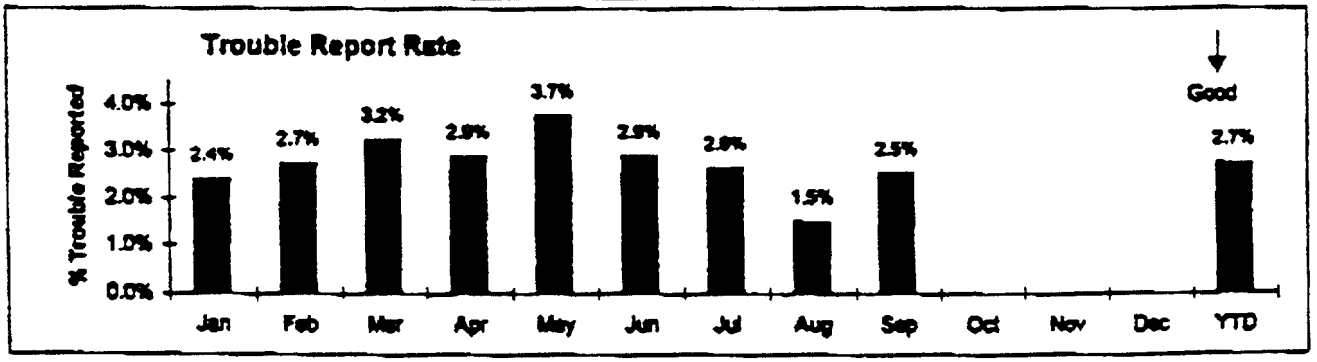
COMPANY "XYZ"

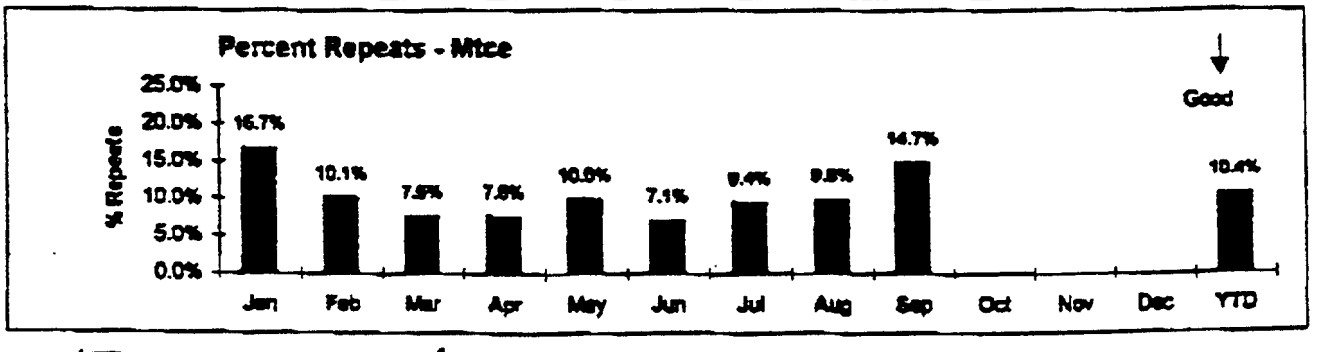
Wholesale Resale Performance for 1/1/96 to 9/30/96







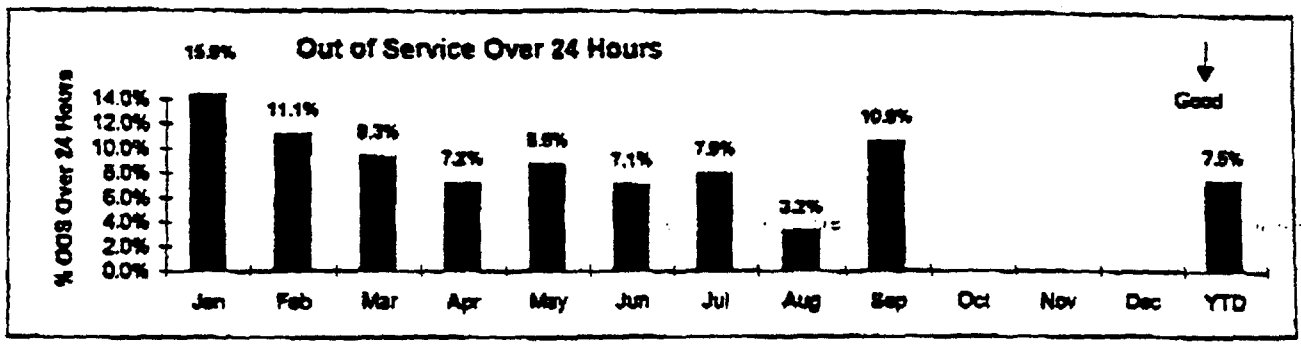


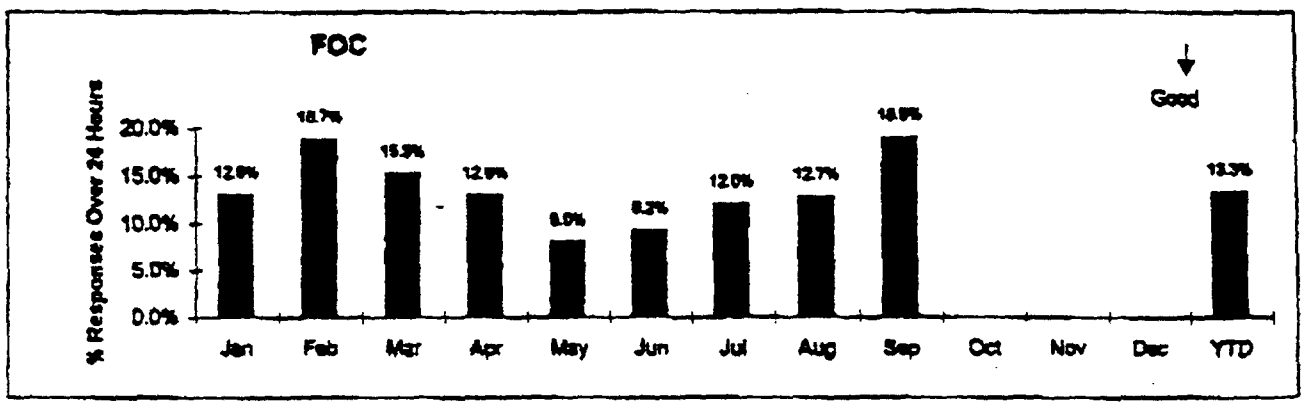


TAB M2-40

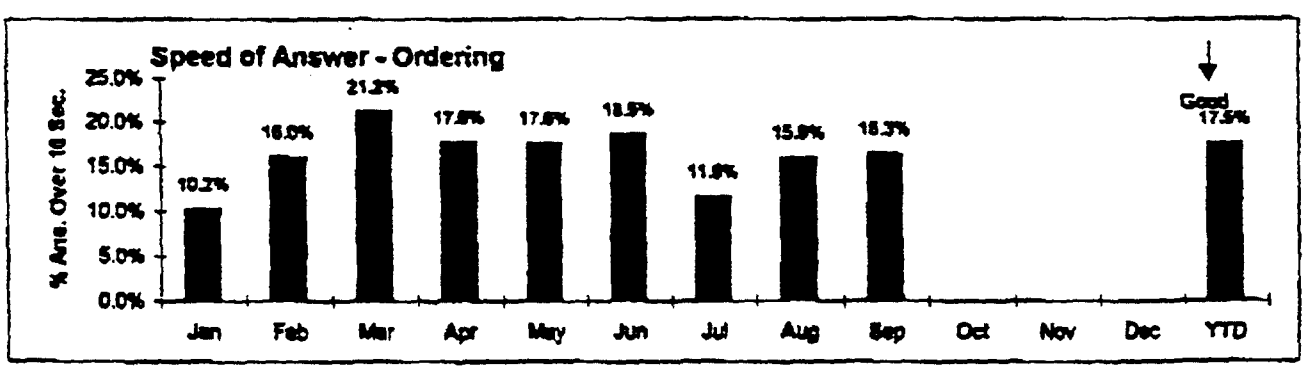
COMPANY "XYZ"

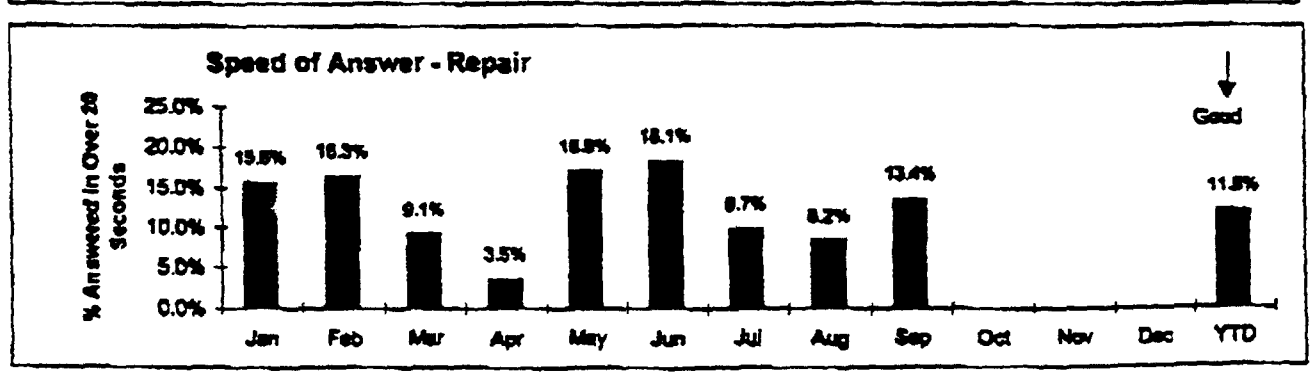
Wholesale Resale Performance for 1/1/95 to 9/30/96





SERVICE PERFORMANCE MEASURES





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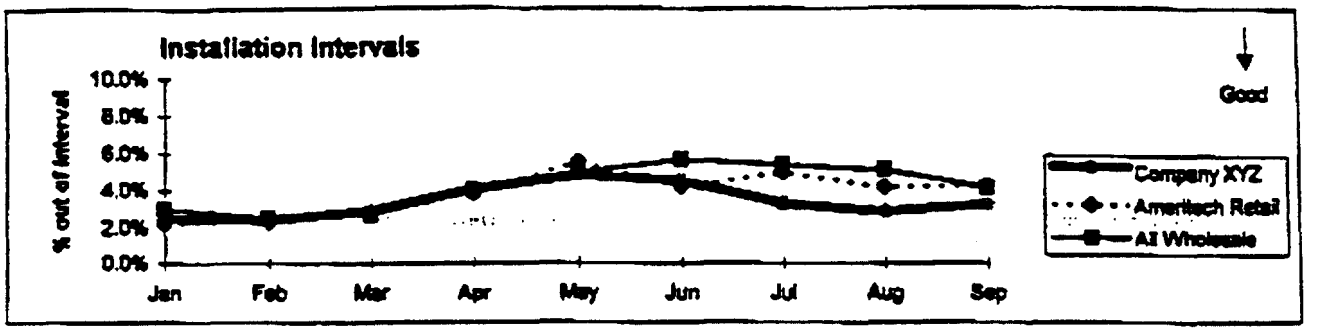
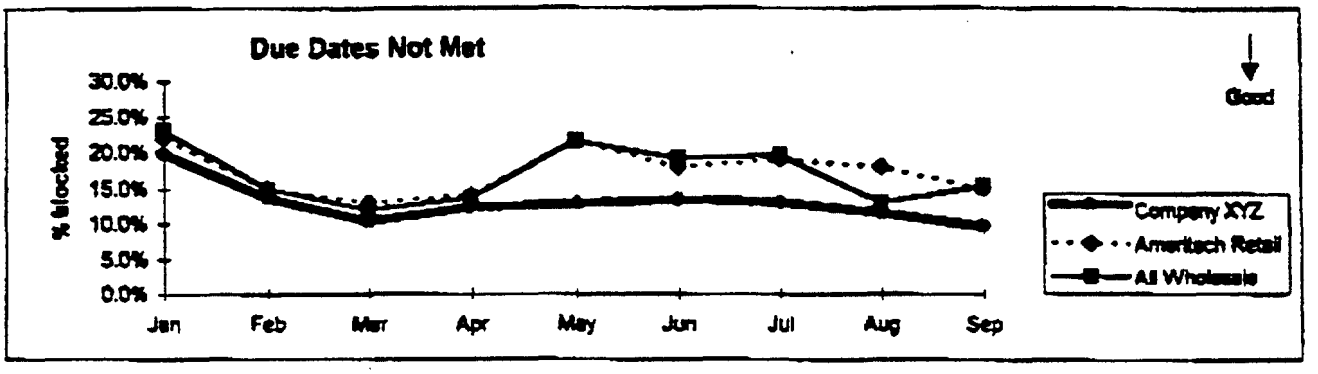
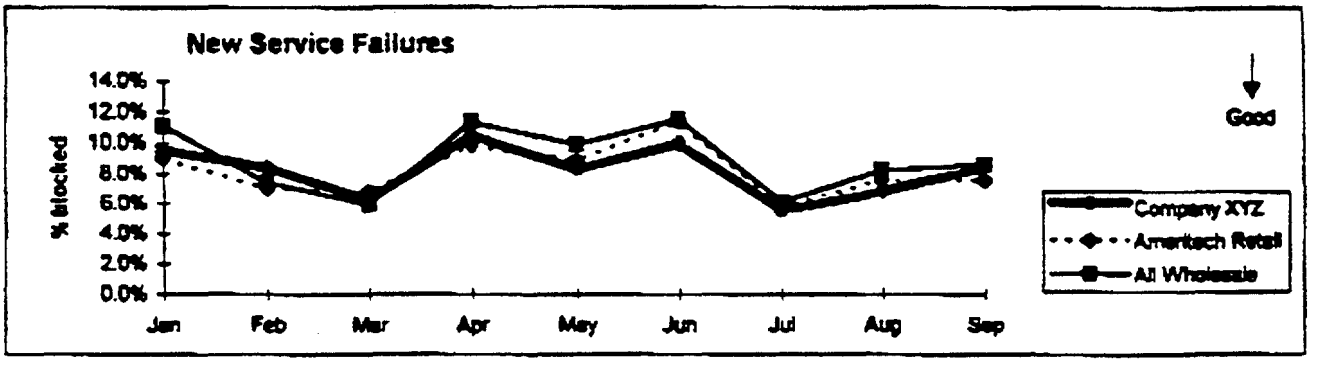
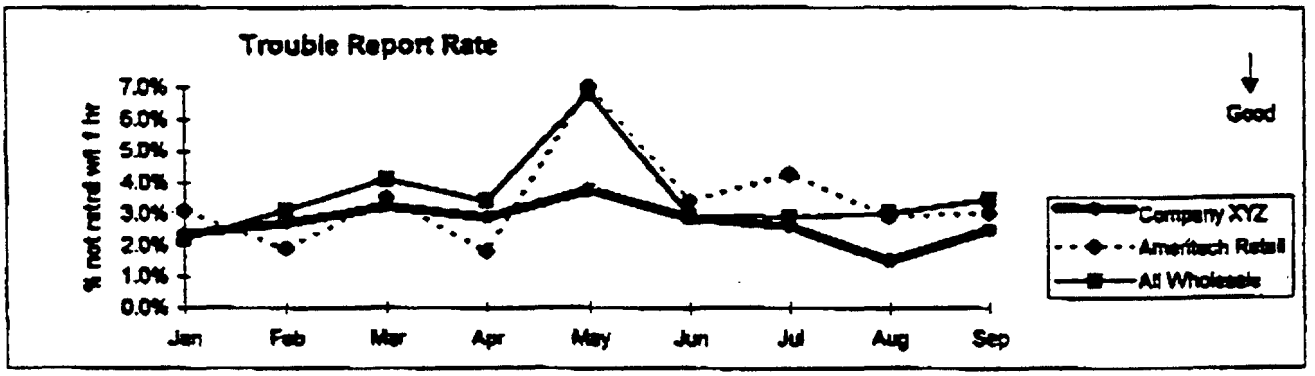
COMPANY "XYZ"

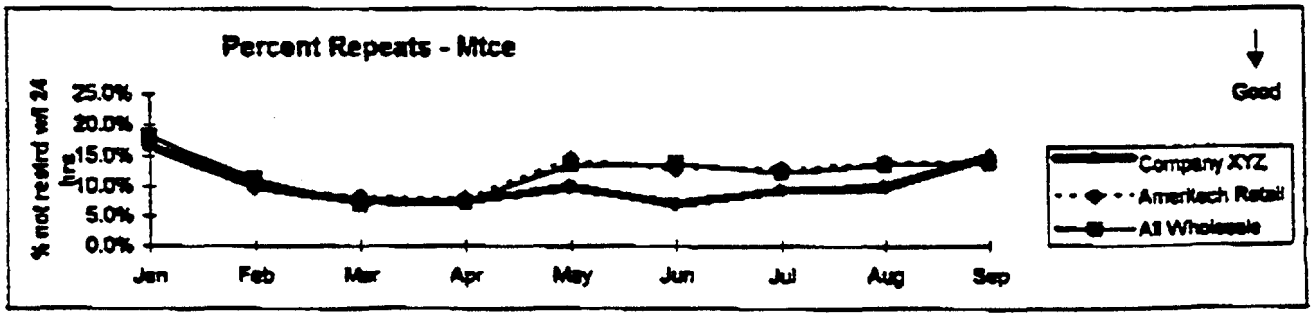
Wholesale Resale Performance for 1/1/96 to 9/30/96







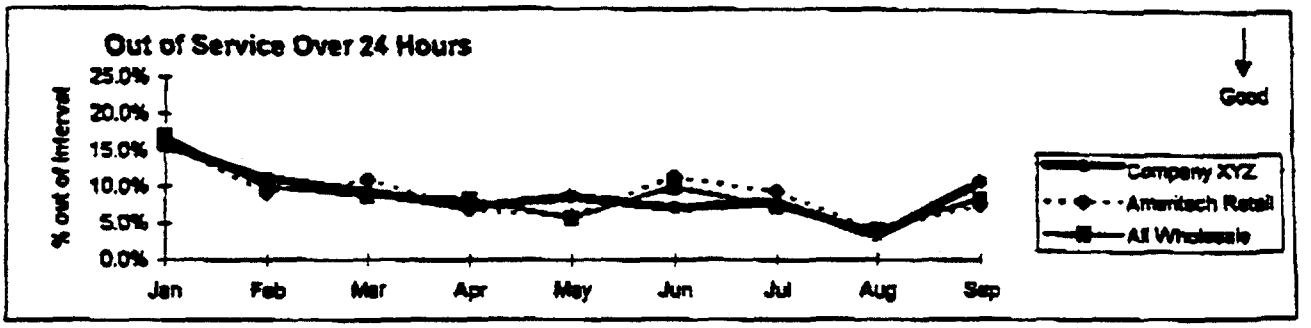


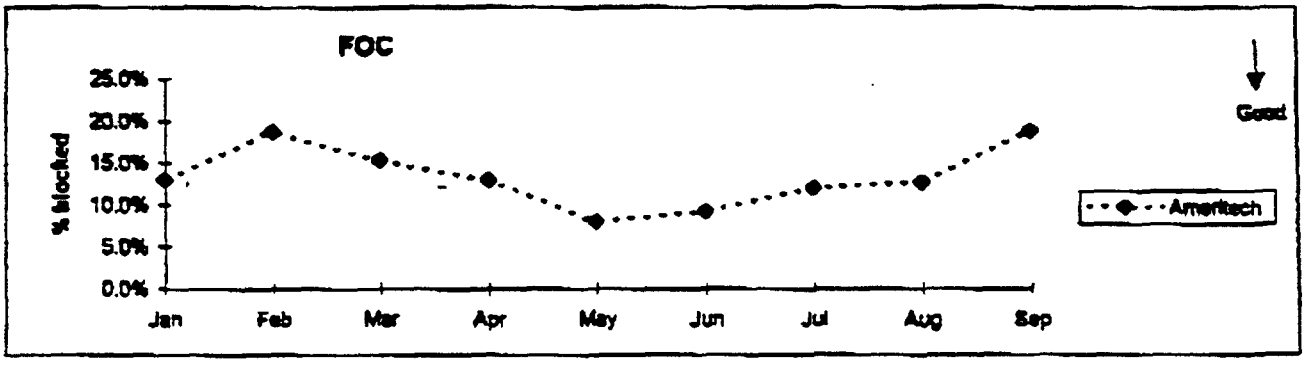


TAB M2-42

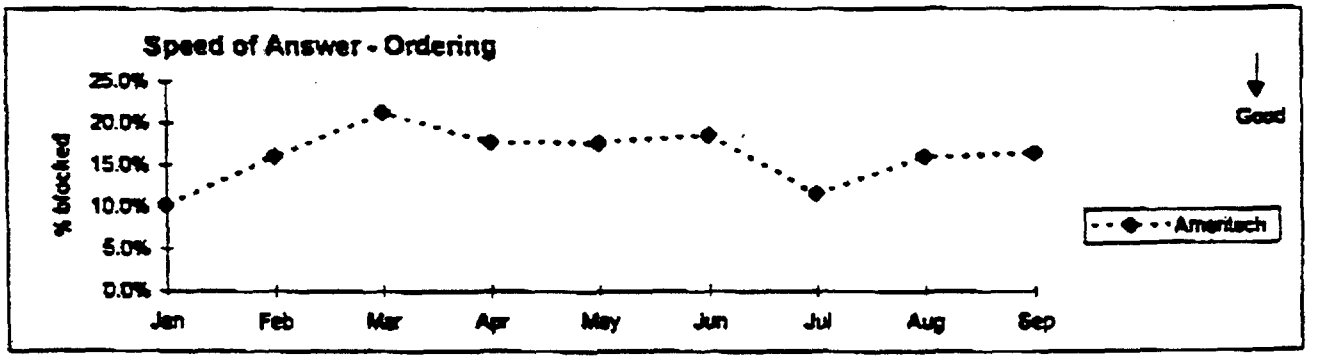
COMPANY "XYZ"

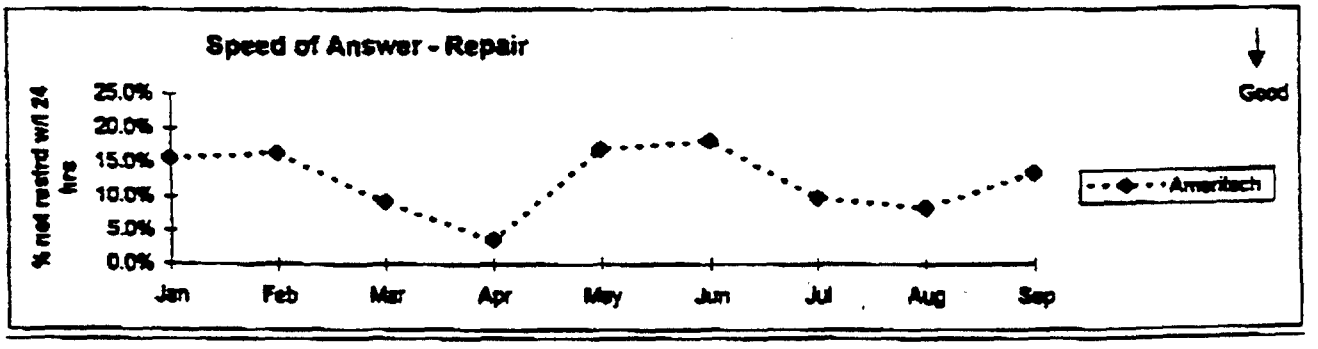
Wholesale Resale Performance for 1/1/96 to 9/30/96





SERVICE PERFORMANCE MEASURES





TAB M2-43

COMPANY "XYZ"

Wholesale Resale Performance for 1/1/96 to 9/30/96

GLOSSARY

Installation Intervals	The agreed-upon interval of time alloted for installation to be performed.
Service Due Dates	The agreed-upon date when service order is due.
New Service Failures	Trouble reported on an installation within 30 days after the original installation is complete.
Trouble Report	Trouble reported by a customer on a service.
Mtce Repeats	Trouble reported on a service within 30 days after the original maintenance work is perform
FOC	Firm Order Confirmation. An acknowledgement to a customer confirming circuit number, order number, and various critical dates. FOC response times vary based on the type of service ordered.

CALCULATIONS

Installations Outside of Interval	The Percent of Installations Outside of Interval is calculated by dividing the number of installations not completed within the agreed upon time interval by the total number of installations in the reporting period.
Due Dates Not Met	The Percent of Due Dates Not Met is calculated by dividing the number of missed appointments by the total number of appointments in the reporting period.
New Service Failures	The Percent of New Service Failures is calculated by dividing the number of lines that fail within thirty days after installation by the the total number of installations in the reporting period.
Trouble Report Rate	The Trouble Report Rate is calculated by dividing the number of lines reported with trouble by the total number of lines in service in the reporting period.
Percent Repeats - Mtce	The Percent Repeats - Mtce is calculated by dividing the number of repeat reports by the total number of lines in service in the reporting period.
OOS Over 24	The Percent of OOS Over 24 is calculated by dividing the number of lines not restored within 24 hours by the total number of lines reported out of service in the reporting period.
FOC	The Percent of FOC is calculated by dividing the number of requests for service not provided within the agreed upon interval by the total number of requests for service in the reporting period.
Speed of Answer	The Percent of Speed of Answer is calculated by dividing the number of calls not answered within 10 seconds by the total number of calls in the reporting period.
Speed of Answer - Repair	The Percent of Speed of Answer - Repair is calculated by dividing the number of repair ca not answered in 20 seconds by the total number of repair calls in the reporting period.

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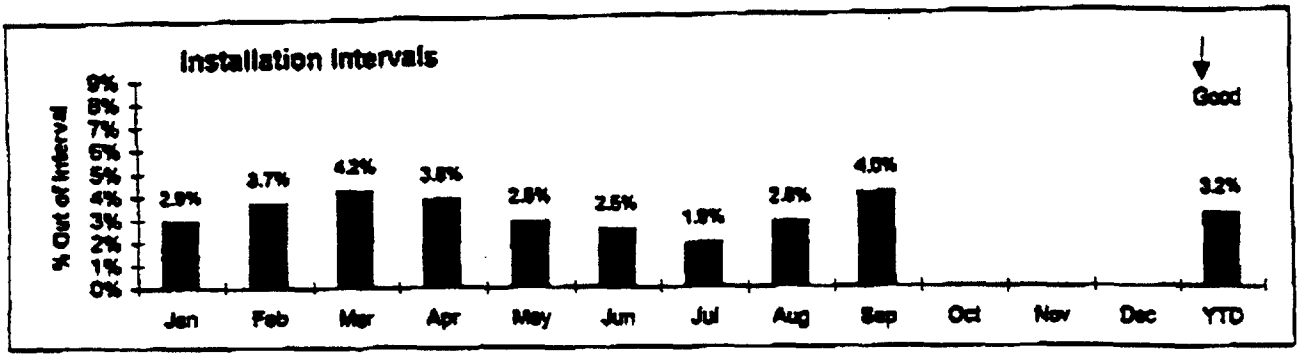
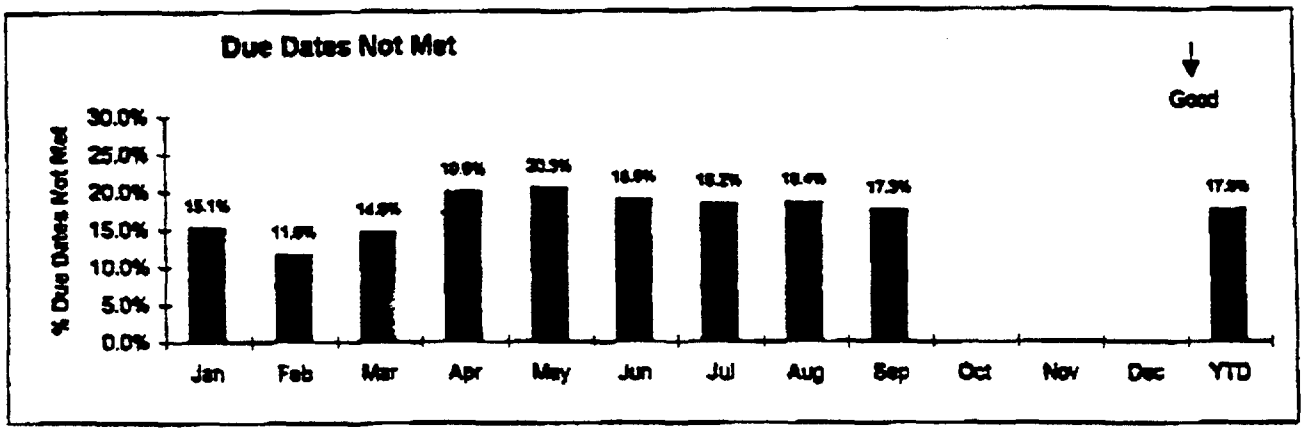
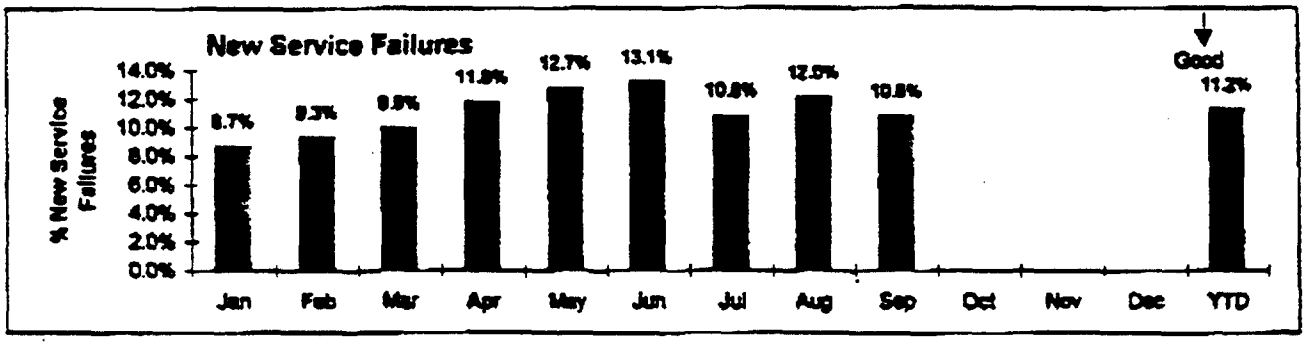
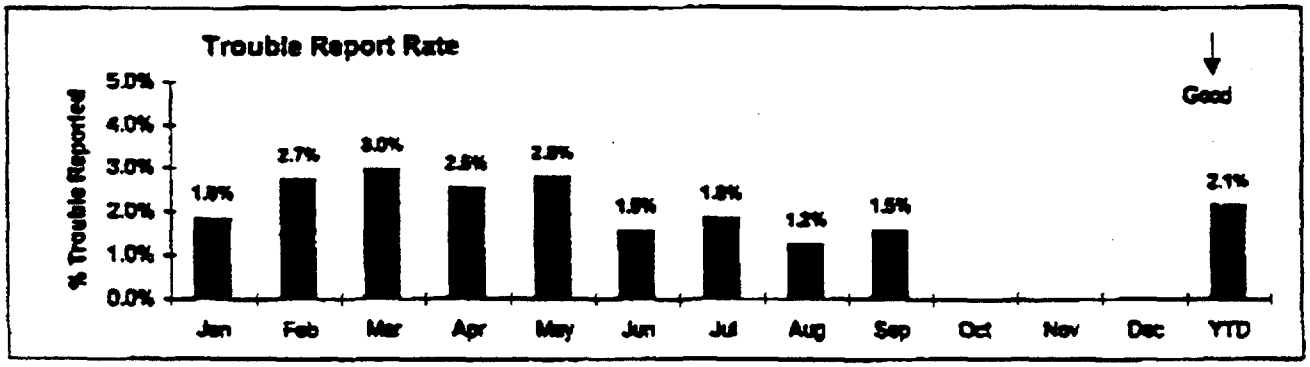
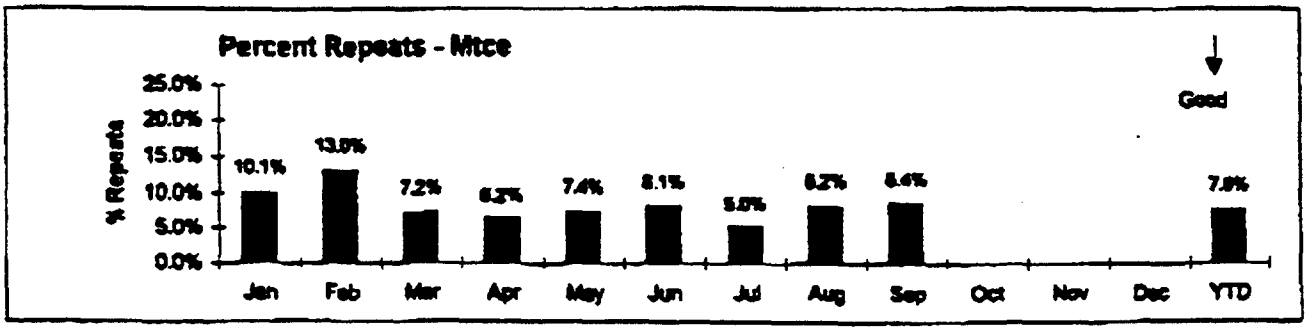
Unbundled Loops Performance for 1/1/96 to 9/30/96



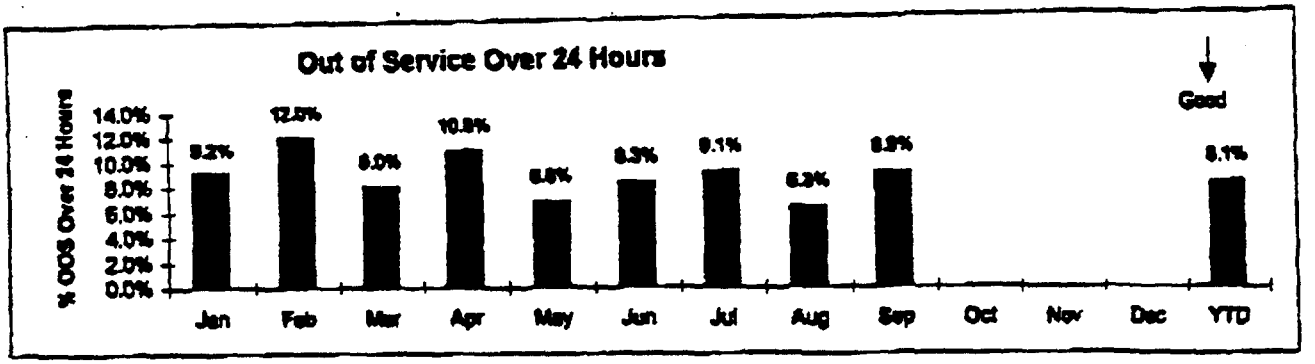


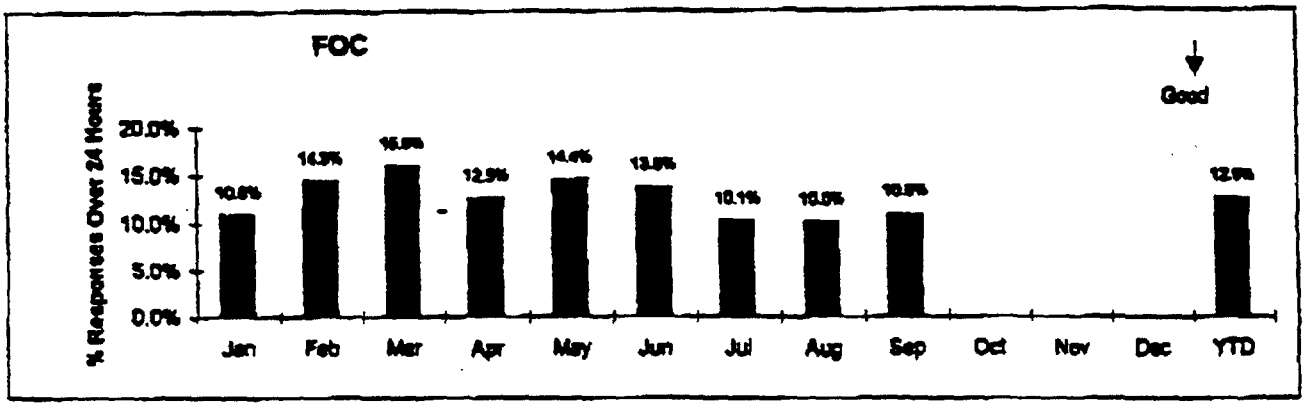




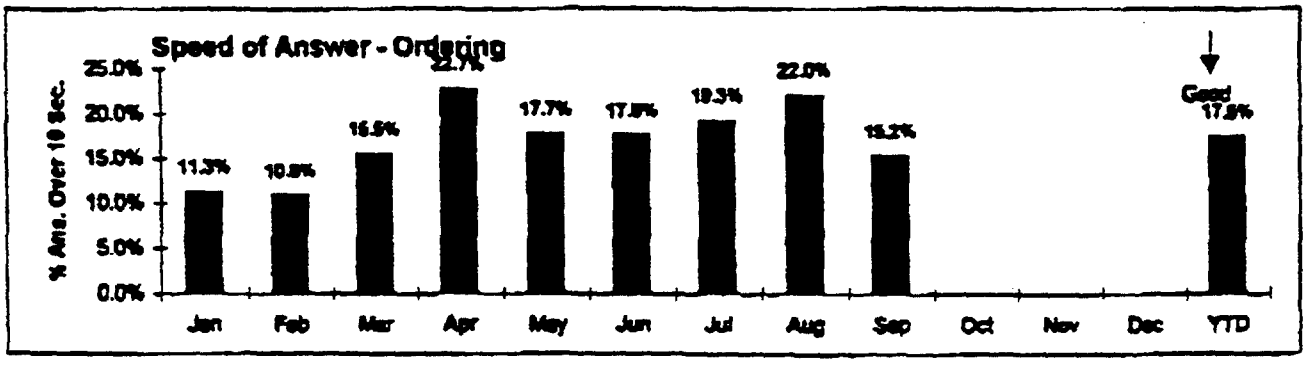


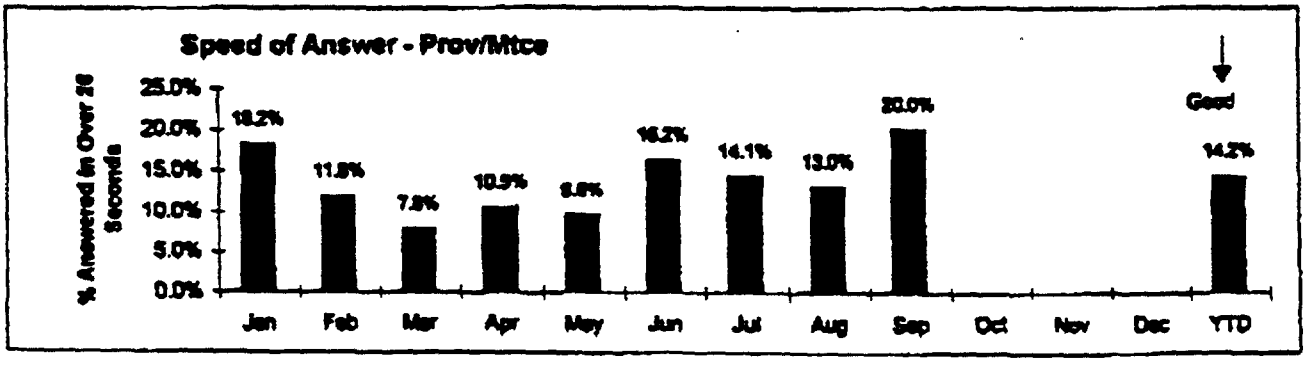
Unbundled Loops Performance for 1/1/96 to 9/30/96





SERVICE PERFORMANCE MEASURES





TAB M2-46

Unbundled Loops Glossary and Calculation Data

GLOSSARY

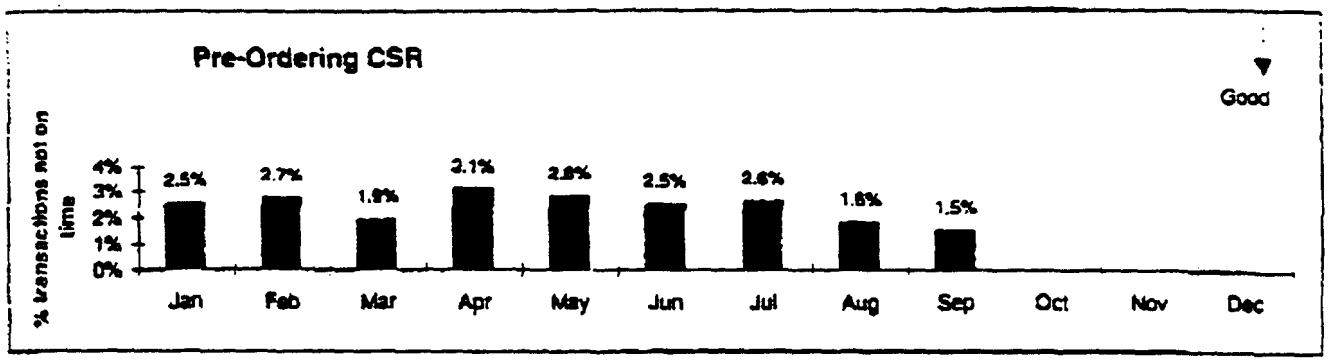
Installation Intervals	The agreed-upon interval of time alloted for installation to be performed.
Service Due Dates	The agreed-upon date when service order is due.
New Service Failures	Trouble reported on an installation within 30 days after the original installation is complete.
Trouble Report	Trouble reported by the customer on a service.
Mtce Repeats	Trouble reported on a service within 30 days after the original maintenance work is perform
FOC	Firm Order Confirmation. An acknowledgement to a customer confirming circuit number, order number, and various critical dates. FOC response times vary based on the type of service ordered.

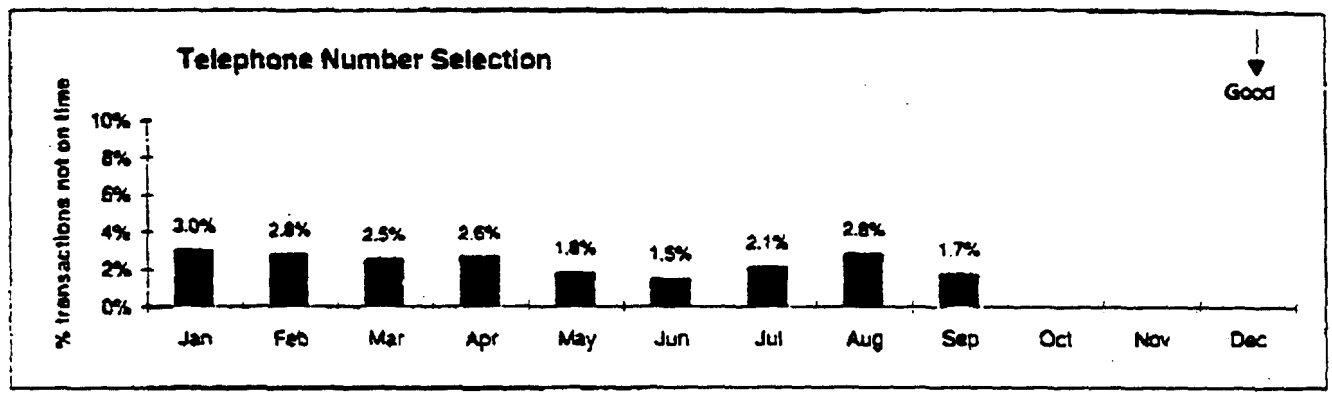
CALCULATIONS

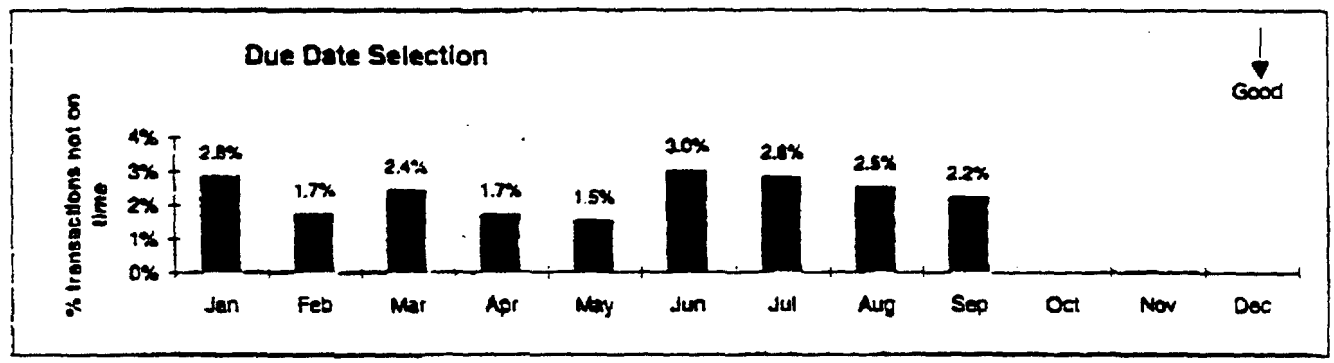
Installations Outside of Interval	The Percent of Installations Outside of Interval is calculated by dividing the number of installations not completed within the agreed upon time interval by the total number of installations in the reporting period.
Due Dates Not Met	The Percent of Due Dates Not Met is calculated by dividing the number of missed appointments by the total number of appointments in the reporting period.
New Service Failures	The Percent of New Service Failures is calculated by dividing the number of lines that fail within thirty days after installation by the the total number of installations in the reporting period.
Trouble Report Rate	The Trouble Report Rate is calculated by dividing the number of lines reported with trouble by the total number of lines in service in the reporting period.
Percent Repeats - Mtce	The Percent Repeats - Mtce is calculated by dividing the number of repeat reports by the total number of lines in service in the reporting period.
OOS Over 24	The Percent of OOS Over 24 is calculated by dividing the number of lines not restored within 24 hours by the total number of lines reported out of service in the reporting period.
FOC	The Percent of FOC is calculated by dividing the number of requests for service not provided within the agreed upon interval by the total number of requests for service in the reporting period.
Speed of Answer - Ordering	The Percent of Speed of Answer - Ordering is calculated by dividing the number of orderi calls not answered within 10 seconds by the total number of ordering calls in the reporting period.
Speed of Answer - Prov/Mtce	The Percent of Speed of Answer - Prov/Mtce is calculated by dividing the number of Prov/Mtce calls not answered in 20 seconds by the total number of Prov/Mtce calls in the reporting period.

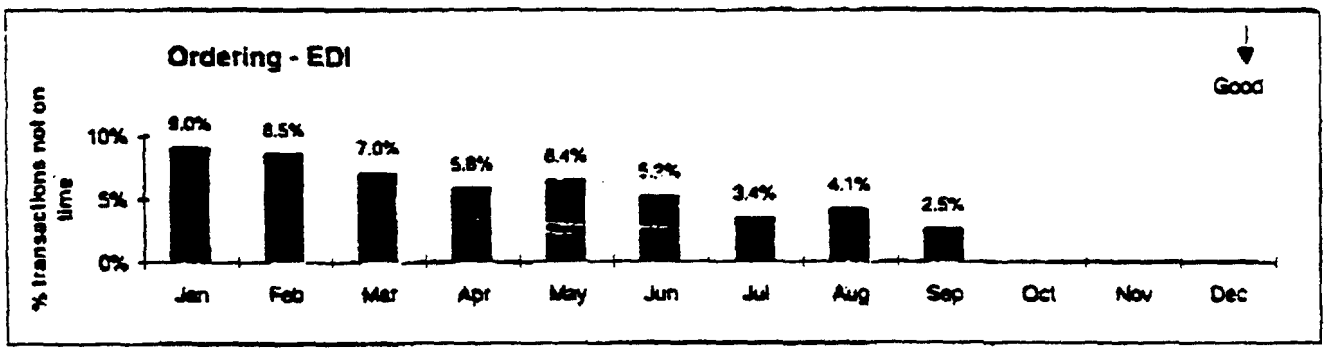
TAB M2-47

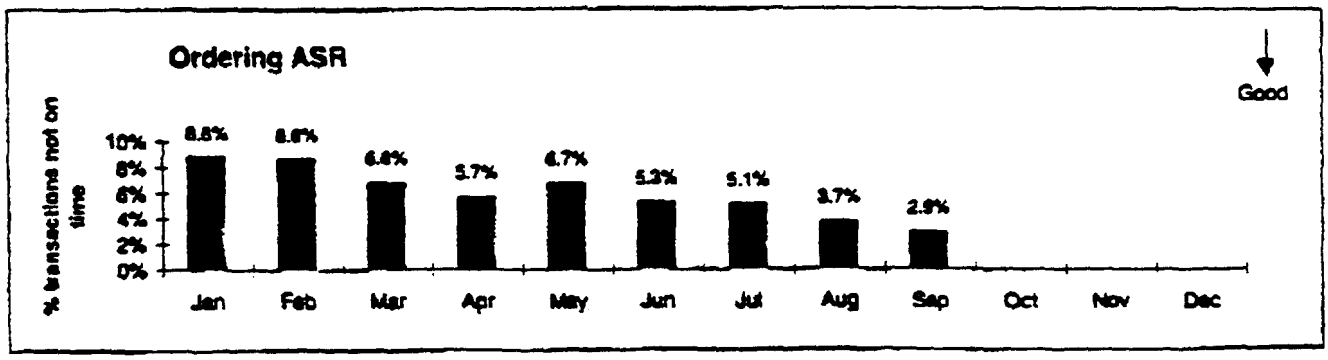
Company XYZ
OSS Function Cycle Time for 1/1/96 to 9/30/96





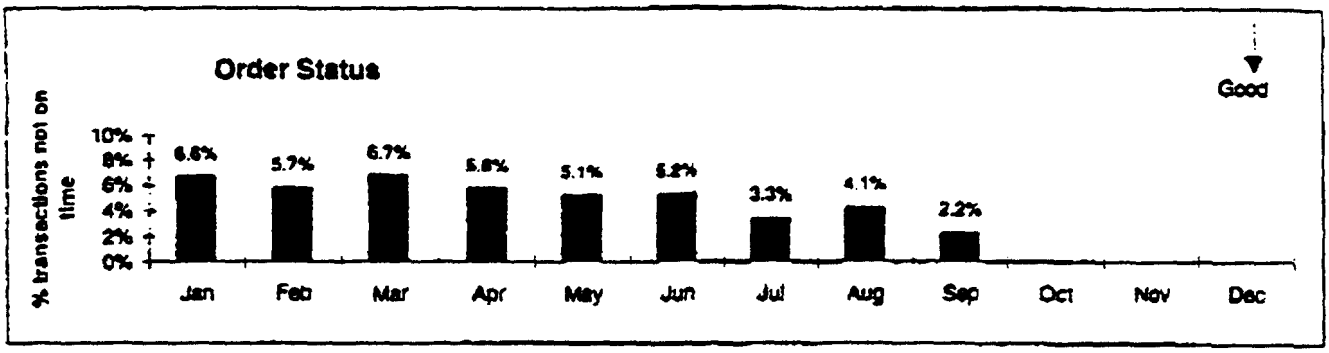


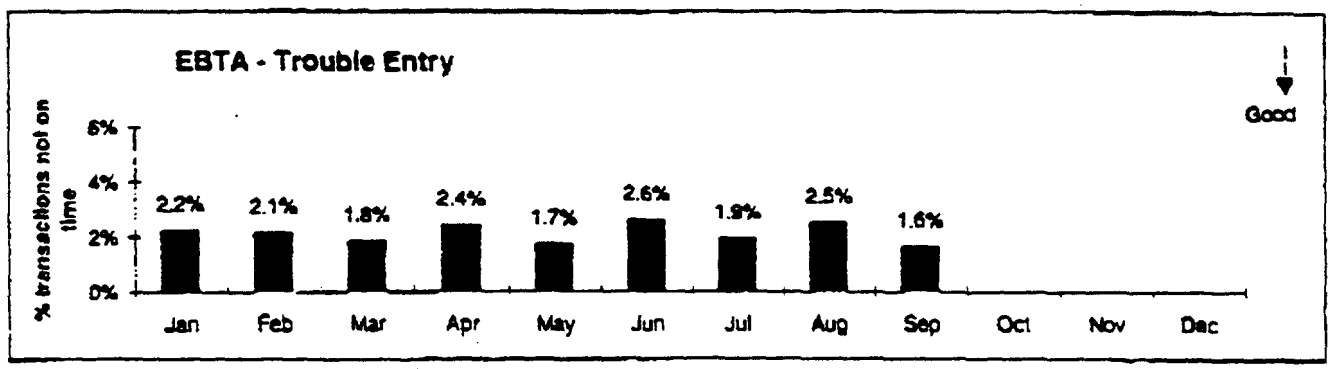


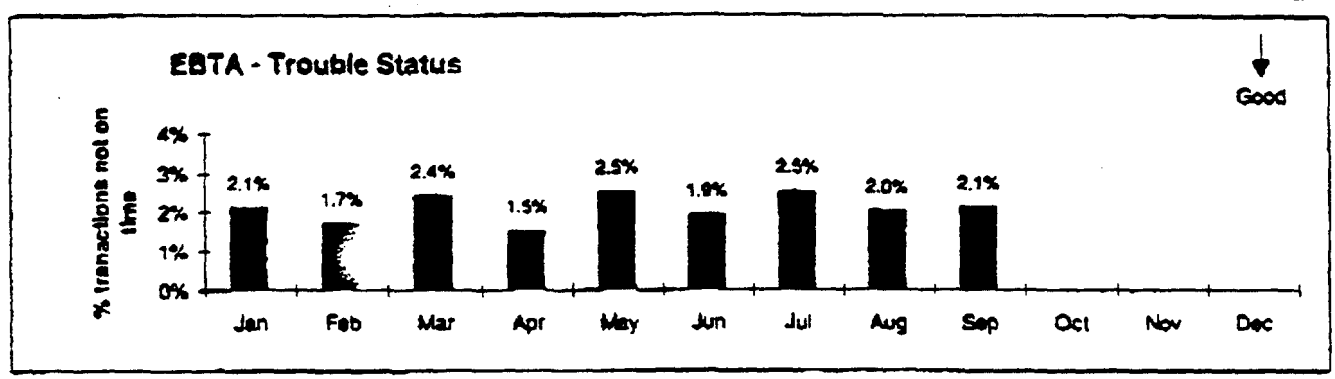


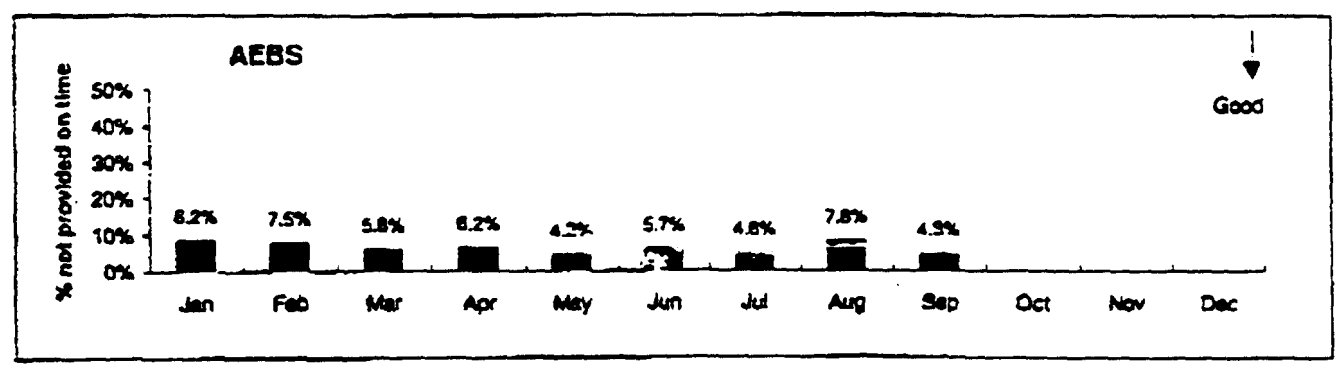
This Report Does Not Represent Actual Results.

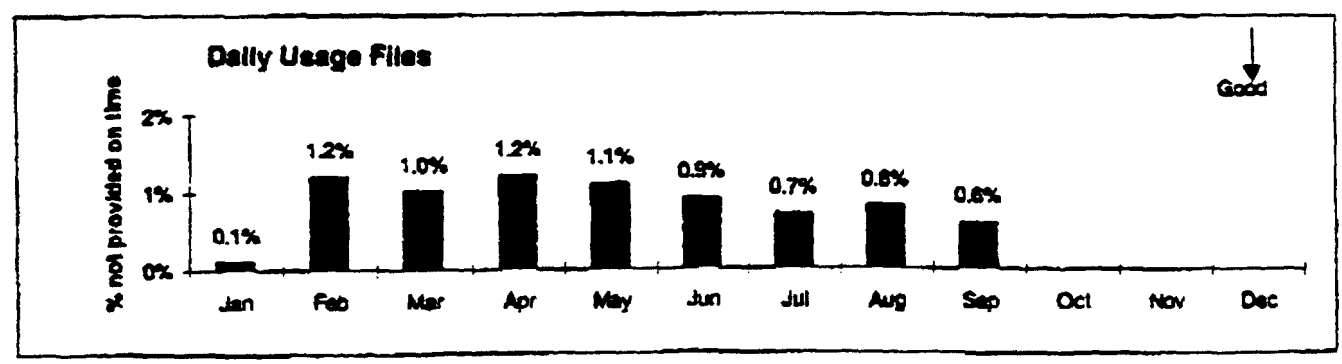
Company XYZ
OSS Function Cycle Time for 1/1/95 to 9/30/96











This Report Does Not Represent Actual Results.